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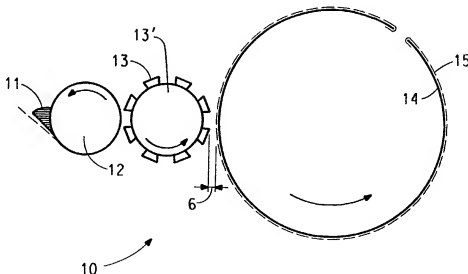
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- (74) Agent: COTREAU, William, Joseph; E.I. Du Pont De Nemours and Company, Legal Patent Records Center, 4417 Lancaster Pike, Wilmington, DE 19805 (US).
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- (71) Applicant (for all designated States except US): E.I. DU PONT DE NEMOURS AND COMPANY [US/US]; Legal Patent Records Center, 1007 Market Street, Wilmington DE 19898 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): O'BRIEN, William, George [US/US]; 3 Orbit Circle, Newark, DE 19711 (US).
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(54) Title: PRODUCTION OF CATALYST COATED MEMBRANES



(57) Abstract: A method for the production of catalyst coated membranes, especially catalyst coated membranes for use in fuel cells, includes raised relief printing a catalyst coating composition (11) onto the surface of an ion exchange membrane (16) to form at least one electrode layer.



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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01M8/10 C25B9/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 037 295 A (DEGUSSA) 20 September 2000 (2000-09-20) paragraphs '0017'-'0021', '0042! examples 1-3	1-5, 8-10
X	US 6 074 692 A (HULETT JAY'S) 13 June 2000 (2000-06-13) column 5, line 17 - line 43 column 7, line 37 examples 1-5	1, 2, 8-10
A	JP 09 245802 A (TANAKA KIKINZOKU KOGYO KK; WATANABE MASAHIRO; STONEHARD ASSOC INC) 19 September 1997 (1997-09-19) abstract	4-7

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☒ Further documents are listed in the continuation of box C.

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Name and mailing address of the ISA

European Patent Office, P.B. 5618 Potentiaaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax. (+31-70) 340-3016

Authorized officer

Jacquinot, P

INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 09 245801 A (TANAKA KIKINZOKU KOGYO KK; WATANABE MASAHIRO; STONEHARD ASSOC INC) 19 September 1997 (1997-09-19) abstract	4-7

INTERNATIONAL SEARCH REPORT

Information on patent family members

Int. Application No
PCT/US 01/51385

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 1037295	A	20-09-2000	DE 19910773 A1 28-09-2000
			BR 0001290 A 19-06-2001
			CA 2300226 A1 11-09-2000
			DE 59900126 D1 19-07-2001
			DK 1037295 T3 01-10-2001
			EP 1037295 A1 20-09-2000
			ES 2159978 T3 16-10-2001
		JP 2000268829 A	29-09-2000
US 6074692	A	13-06-2000	NONE
JP 09245802	A	19-09-1997	NONE
JP 09245801	A	19-09-1997	NONE

INTERNATIONAL SEARCH REPORT
Information on patent family members

International Application No
PCT/US 02/34103

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 19705469	C	22-10-1998	DE 19705469 C1	22-10-1998
US 5336570	A	09-08-1994	WO 9405051 A1 US 5458989 A US 5509942 A	03-03-1994 17-10-1995 23-04-1996
FR 2805927	A	07-09-2001	FR 2805927 A1 CA 2400146 A1 EP 1259995 A1 WO 0165623 A1 US 2003022054 A1	07-09-2001 07-09-2001 27-11-2002 07-09-2001 30-01-2003
US 6074692	A	13-06-2000	NONE	
WO 9723916	A	03-07-1997	DE 19548422 A1 WO 9723916 A2	11-09-1997 03-07-1997
WO 0072391	A	30-11-2000	US 6403245 B1 AU 5151300 A CA 2371428 A1 EP 1181727 A2 JP 2003500822 T WO 0072391 A2	11-06-2002 12-12-2000 30-11-2000 27-02-2002 07-01-2003 30-11-2000
US 5945231	A	31-08-1999	US 2002058178 A1 US 6391486 B1	16-05-2002 21-05-2002
WO 02058178	A	25-07-2002	JP 2002216789 A JP 2002246040 A JP 2002246041 A EP 1278260 A1 WO 02058178 A1	02-08-2002 30-08-2002 30-08-2002 22-01-2003 25-07-2002